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| Form PTO-1449 Modified List of Patent and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office | Docket No. ISIS-4288 | Serial No. 09/438,989 |
| | Applicant Yogesh S. Sanghvi et al. | |
| | Filing Date November 12, 1999 | Group 2953 |

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| Examiner Initial | | Document No. | Date | Name | Class | Subclass |
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| <i>HO</i> | FK | 3,687,808 | 08/29/72 | Merigan et al. | 195 | 28 |
| | FL | 4,689,320 | 08/25/87 | Kaji | 514 | 44 |
| | FM | 4,806,463 | 02/21/89 | Goodchild et al. | 435 | 5 |
| | FN | 5,004,810 | 04/02/91 | Draper | 536 | 27 |
| | FO | 5,166,195 | 11/24/92 | Ecker | 514 | 44 |
| | FP | 5,194,428 | 03/16/93 | Agrawal et al. | 514 | 44 |
| | FQ | 5,212,295 | 05/18/93 | Cook | 536 | 26.7 |
| | FR | 5,242,906 | 09/07/93 | Pagano et al. | 514 | 44 |
| | FS | 5,248,670 | 09/28/93 | Draper et al. | 514 | 44 |
| <i>HO</i> | FT | 5,442,049 | 08/15/95 | Anderson et al. | 536 | 24.5 |

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| | | | | | YES | NO |
| <i>HO</i> | FU | WO 94/08003 | 04/14/94 | PCT | X | |
| | FV | WO 99/05160 | 02/04/99 | PCT | X | |
| | FW | WO 89/12060 | 12/14/89 | PCT | X | |
| | FX | WO 90/15065 | 12/13/90 | PCT | X | |
| | FY | WO 91/08213 | 06/13/91 | PCT | X | |
| <i>HO</i> | FZ | WO 91/10671 | 07/25/91 | PCT | X | |

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| | | | | Applicant Yogesh S. Sanghvi et al. | | | |
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| <i>Ho</i> | GA | 5,457,189 | 10/10/95 | Crooke et al. | 536 | 24.5 | |
| | GB | 5,489,677 | 02/06/96 | Sanghvi et al. | 536 | 22.1 | |
| | GC | 5,514,577 | 05/07/96 | Draper et al. | 435 | 238 | |
| | GD | 5,514,788 | 05/07/96 | Bennett et al. | 536 | 23.1 | |
| | GE | 5,523,389 | 06/04/96 | Ecker et al. | 536 | 23.1 | |
| | GF | 5,580,767 | 12/03/96 | Cowsert et al. | 435 | 172.3 | |
| | GG | 5,582,972 | 12/10/96 | Lima et al. | 435 | 6 | |
| | GH | 5,582,986 | 12/10/96 | Monia et al. | 435 | 6 | |
| | GI | 5,587,361 | 12/24/96 | Cook et al. | 514 | 44 | |
| <i>Ho</i> | GJ | 5,591,600 | 01/07/97 | Ecker | 435 | 69.1 | |
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| Examiner Initial | | Document No. | Date | Country | Translation YES NO | | |
| <i>Ho</i> | GK | WO 91/15500 | 10/17/91 | PCT | X | | |
| | GL | WO 91/18997 | 12/12/91 | PCT | X | | |
| | GM | WO 92/02258 | 02/20/92 | PCT | X | | |
| | GN | WO 92/03568 | 03/05/92 | PCT | X | | |
| <i>Ho</i> | GO | WO 92/05186 | 04/02/92 | PCT | X | | |
| EXAMINER <i>[Signature]</i> | | | | DATE CONSIDERED <i>1-10-05</i> | | | |

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| <i>Ho</i> | GP | 5,591,623 | 01/07/97 | Bennett et al. | 435 | 240.2 |
| | GQ | 5,591,720 | 01/07/97 | Anderson et al. | 514 | 44 |
| | GR | 5,599,797 | 02/04/97 | Cook et al. | 514 | 44 |
| | GS | 5,607,923 | 03/04/97 | Cook et al. | 514 | 44 |
| | GT | 5,620,963 | 04/15/97 | Cook et al. | 514 | 44 |
| | GU | 5,658,891 | 08/19/97 | Draper et al. | 514 | 44 |
| | GV | 5,661,134 | 08/26/97 | Cook et al. | 514 | 44 |
| | GW | 5,681,747 | 10/28/97 | Boggs et al. | 435 | 375 |
| | GX | 5,681,944 | 10/28/97 | Crooke et al. | 536 | 24.5 |
| <i>Ho</i> | GY | 5,691,461 | 11/25/97 | Ecker et al. | 536 | 24.32 |

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| <i>Ho</i> | GZ | WO 92/19637 | 11/12/92 | PCT | X | |
| | HA | WO 92/20822 | 11/26/92 | PCT | X | |
| | HB | WO 92/20823 | 11/26/92 | PCT | X | |
| | HC | WO 93/07883 | 04/29/93 | PCT | X | |
| <i>Ho</i> | HD | 0 216 860 B1 | 10/28/92 | EPO | X | |
| EXAMINER <i>Howard Chen</i> | | | | DATE CONSIDERED <i>1-10-05</i> | | |

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| <i>HO</i> | HE | 4,415,732 | 11/15/83 | Caruthers et al. | 536 | 27 |
| | HF | 4,458,066 | 07/03/84 | Caruthers et al. | 536 | 27 |
| | HG | 4,469,863 | 09/04/84 | Ts'o et al. | 536 | 27 |
| | HH | 4,476,301 | 10/09/84 | Imbach et al. | 536 | 27 |
| | HI | 4,500,707 | 02/19/85 | Caruthers et al. | 536 | 27 |
| | HJ | 4,668,777 | 05/26/89 | Caruthers et al. | 536 | 27 |
| | HK | 4,725,677 | 02/16/88 | Köster et al. | 536 | 27 |
| | HL | 4,816,571 | 03/28/89 | Andrus et al. | 536 | 27 |
| | HM | 4,973,679 | 11/27/90 | Caruthers et al. | 536 | 27 |
| | HN | 5,023,243 | 06/11/91 | Tullis | 514 | 44 |
| | HO | 5,034,506 | 07/23/91 | Summerton et al. | 528 | 391 |
| <i>HO</i> | HP | 5,132,418 | 07/21/92 | Caruthers et al. | 536 | 27 |

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| <i>Ho</i> | HQ | Re. 34,069 | 09/15/92 | Köster et al. | 536 | 27 |
| | HR | 5,166,315 | 11/24/92 | Summerton et al. | 528 | 406 |
| | HS | 5,177,196 | 01/05/93 | Meyer, Jr. et al. | 536 | 22.1 |
| | HT | 5,185,444 | 02/09/93 | Summerton et al. | 544 | 81 |
| | HU | 5,188,897 | 2/23/93 | Suhadolnik et al. | 428 | 402.2 |
| | HV | 5,214,134 | 05/25/93 | Weis et al. | 536 | 25.3 |
| | HW | 5,216,141 | 06/01/93 | Benner | 536 | 27.13 |
| | HX | 5,235,033 | 08/10/93 | Summerton et al. | 528 | 391 |
| | HY | 5,264,423 | 11/23/93 | Cohen et al. | 514 | 44 |
| | HZ | 5,264,562 | 11/23/93 | Matteucci | 536 | 23.1 |
| | IA | 5,264,564 | 11/23/93 | Matteucci | 536 | 23.1 |
| <i>Ho</i> | IB | 5,276,019 | 01/04/94 | Cohen et al. | 514 | 44 |

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| <i>Y/S</i> | IC | 5,278,302 | 01/11/94 | Caruthers et al. | 536 | 24.5 |
| | ID | 5,286,717 | 02/15/94 | Cohen et al. | 514 | 44 |
| | IE | 5,321,131 | 06/14/94 | Agrawal et al. | 536 | 25.34 |
| | IF | 5,399,676 | 03/21/95 | Froehler | 536 | 23.1 |
| | IG | 5,405,938 | 04/11/95 | Summerton et al. | 528 | 406 |
| | IH | 5,405,939 | 04/11/95 | Suhadolnik et al. | 530 | 322 |
| | II | 5,434,257 | 08/18/95 | Matteucci et al. | 536 | 24.3 |
| | IJ | 5,453,496 | 09/26/95 | Caruthers et al. | 536 | 24.5 |
| | IK | 5,455,233 | 10/03/95 | Spielvogel et al. | 514 | 44 |
| | IL | 5,466,677 | 11/14/95 | Baxter et al. | 514 | 44 |
| | IM | 5,470,967 | 11/28/95 | Huie et al. | 536 | 24.3 |
| <i>Y/S</i> | IN | 5,476,925 | 12/19/95 | Letsinger et al. | 536 | 23.1 |

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| <i>Ho</i> | IO | 5,519,126 | 05/21/96 | Hecht | 536 | 24.3 |
| | IP | 5,536,821 | 07/16/96 | Agrawal et al. | 536 | 22.1 |
| | IQ | 5,541,306 | 07/30/96 | Agrawal et al. | 536 | 22.1 |
| | IR | 5,541,307 | 07/30/96 | Cook et al. | 536 | 23.1 |
| | IS | 5,550,111 | 08/27/96 | Suhadolnik et al. | 514 | 44 |
| | IT | 5,561,225 | 10/01/96 | Maddry et al. | 536 | 23.1 |
| | IU | 5,563,253 | 10/08/96 | Agrawal et al. | 536 | 22.1 |
| | IV | 5,571,799 | 11/05/96 | Tkachuk et al. | 514 | 47 |
| | IW | 5,596,086 | 01/21/97 | Matteucci et al. | 536 | 22.1 |
| | IX | 5,602,240 | 02/11/97 | De Mesmaeker et al. | 536 | 23.1 |
| | IY | 5,608,046 | 03/04/97 | Cook et al. | 536 | 23.1 |
| <i>Ho</i> | IZ | 5,610,289 | 03/11/97 | Cook et al. | 536 | 25.34 |

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| <i>Ho</i> | JA | 5,618,704 | 04/08/97 | Sanghvi et al. | 435 | 91.5 |
| | JB | 5,623,070 | 04/22/97 | Cook et al. | 536 | 27.6 |
| | JC | 5,625,050 | 04/29/97 | Beaton et al. | 536 | 24.1 |
| | JD | 5,633,360 | 05/27/97 | Bischofberger et al. | 536 | 22.1 |
| | JE | 5,663,312 | 09/02/97 | Chaturvedula | 536 | 22.1 |
| | JF | 5,670,633 | 09/23/97 | Cook et al. | 536 | 23.1 |
| | JG | 5,677,437 | 10/14/97 | Teng et al. | 536 | 23.1 |
| | JH | 5,677,439 | 10/14/97 | Weis et al. | 536 | 23.1 |
| | JI | 4,845,205 | 07/04/89 | Huynh Dinh et al. | 536 | 28 |
| | JJ | 4,981,957 | 01/01/91 | Lebleu et al. | 536 | 27 |
| | JK | 5,118,800 | 06/02/92 | Smith et al. | 536 | 23 |
| <i>Ho</i> | JL | 5,124,047 | 06/23/92 | Quach, et al. | 210 | 699 |

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| <i>HO</i> | JM | 5,130,302 | 07/14/92 | Spielvogel et al. | 514 | 45 |
| | JN | 5,134,066 | 07/28/92 | Rogers et al. | 435 | 91 |
| | JO | 5,138,045 | 08/11/92 | Cook et al. | 536 | 27 |
| | JP | 5,175,273 | 12/29/92 | Bischofberger et al. | 536 | 27 |
| | JQ | 5,218,105 | 06/08/93 | Cook et al. | 536 | 25.31 |
| | JR | 5,223,618 | 06/29/93 | Cook et al. | 544 | 276 |
| | JS | 5,264,562 | 11/23/93 | Matteucci | | |
| | JT | 5,319,080 | 06/07/94 | Leumann | 536 | 27.1 |
| | JU | 5,359,044 | 10/25/94 | Cook et al. | 536 | 23.1 |
| | JV | 5,367,066 | 11/22/94 | Urdea et al. | 536 | 24.3 |
| | JW | 5,378,825 | 01/03/95 | Cook et al. | 536 | 25.34 |
| | JX | 5,386,023 | 01/31/95 | Sanghvi et al. | 536 | 25.3 |
| | JY | 5,393,878 | 02/28/95 | Leumann | 536 | 28.2 |
| | JZ | 5,432,272 | 07/11/95 | Benner | 536 | 25.3 |
| | KA | 5,446,137 | 08/29/95 | Maag et al. | 536 | 23.1 |
| | KB | 5,457,187 | 10/10/95 | Gmeiner et al. | 536 | 25.5 |
| | KC | 5,457,191 | 10/10/95 | Cook et al. | 536 | 27.13 |
| | KD | 5,459,255 | 10/17/95 | Cook et al. | 536 | 27.13 |
| | KE | 5,466,786 | 11/14/95 | Buhr et al. | 536 | 26.26 |
| | KF | 5,484,908 | 01/16/96 | Froehler et al. | 536 | 24.31 |
| <i>HO</i> | KS | 5,503,177 | 03/26/96 | Matteucci et al. | 536 | 2605 |
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| | KI | 5,514,785 | 05/07/96 | Van Ness et al. | 536 | 22.1 | |
| | KJ | 5,519,134 | 05/21/96 | Acevedo et al. | 544 | 243 | |
| | KK | 5,525,711 | 06/11/96 | Hawkins et al. | 536 | 22.1 | |
| | KL | 5,543,507 | 08/06/96 | Cook et al. | 536 | 23.1 | |
| | KM | 5,552,540 | 09/03/96 | Haralambidis | 536 | 25.34 | |
| | KN | 5,567,811 | 10/22/96 | Misiura et al. | 536 | 25.34 | |
| | KO | 5,571,902 | 11/05/96 | Ravikumar et al. | 536 | 22.1 | |
| | KP | 5,576,427 | 11/19/96 | Cook et al. | 536 | 23.1 | |
| | KQ | 5,578,718 | 11/26/96 | Cook et al. | 536 | 27.21 | |
| | KR | 5,587,469 | 12/24/96 | Cook et al. | 536 | 23.1 | |
| | KS | 5,591,722 | 01/07/97 | Montgomery et al. | 514 | 45 | |
| | KT | 5,594,121 | 01/14/97 | Froehler et al. | 536 | 23.5 | |
| | KU | 5,596,086 | 01/21/97 | Matteucci, et al. | 536 | 22.1 | |
| | KV | 5,596,091 | 01/21/97 | Switzer | 536 | 24.5 | |
| | KW | 5,597,909 | 01/28/97 | Urdea et al. | 536 | 24.3 | |
| | KX | 5,602,000 | 02/11/97 | Hyman | 435 | 91.1 | |
| | KY | 5,610,300 | 03/11/97 | Altmann et al. | 544 | 244 | |
| | KZ | 5,614,617 | 03/25/97 | Cook et al. | 536 | 23.1 | |
| | LA | 5,623,065 | 04/22/97 | Cook et al. | 536 | 23.1 | |
| <i>HO</i> | LB | 5,627,053 | 05/06/97 | Usman et al. | 435 | 91.1 | |
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| <i>Ho</i> | LC | 5,639,873 | 06/17/97 | Barascut et al. | 536 | 25.3 | |
| <i>Ho</i> | LD | 5,646,265 | 07/08/97 | McGee | 536 | 25.34 | |
| <i>Ho</i> | LE | 5,658,873 | 08/19/97 | Bertsch-Frank et al. | 510 | 375 | |
| <i>Ho</i> | LF | 5,681,941 | 10/28/97 | Cook et al. | 536 | 23.1 | |
| <i>Ho</i> | LG | 5,700,920 | 12/23/97 | Altmann et al. | 536 | 221 | |
| <i>Ho</i> | LH | 5,817,781 | 10/06/98 | Swaminathan et al. | 536 | 22.1 | |
| <i>Ho</i> | LI | 5,859,221 | 01/12/99 | Cook et al. | 536 | 23.1 | |
| ** <i>Ho</i> | LJ | 07/806,710 | 12/12/91 | Jones, et al. | | | |
| ** | LK | 07/990,848 | 12/11/92 | Jones, et al. | | | |
| ** | LL | 08/398,901 | 03/06/95 | Cook et al. | | | |
| ** | LM | 08/762,488 | 12/10/96 | Cook, et al. | | | |
| ** | LN | 08/837,201 | 03/14/97 | Dean et al. | | | |
| ** | LO | 08/910,629 | 08/13/97 | McKay et al. | | | |
| ** | LP | 09/009,490 | 01/20/98 | Bennett et al. | | | |
| ** | LQ | 09/016,520 | 01/30/98 | Cook et al. | | | |
| ** | LR | 09/044,506 | 03/19/98 | Bennett et al. | | | |
| ** <i>Ho</i> | LS | 09/062,416 | 04/17/98 | Bennett et al. | | | |
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**Pursuant to 37 C.F.R. 1.98(a)(2)(iii) no copy of a U.S. patent application need be included with an Information Disclosure Statement filed under 37 C.F.R. 1.97.

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| ** | LU | 09/123,108 | 07/27/98 | Manoharan et al. | <u> </u> | <u> </u> |
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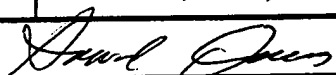
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****Pursuant to 37 C.F.R. 1.98(a)(2)(iii) no copy of a U.S. patent application need be included with an Information Disclosure Statement filed under 37 C.F.R. 1.97.**

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